

Shot put handbook - notebook

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Males throw with a 7.26 kilogram shot

And females with a 4 kilogram shot

The shot put circle is 2.135 metres (7.00 ft) in diameter

Shot putters should try and stay in the ring when throwing

The shot put circle also has a block normally made out of wood but sometimes made out of plastic which is mostly less good

The circle is normally made out of concrete with a metal ring but a very few rings are made out of wood.

Before starting I'd advice to do a good warm up

It's best to use throwing shoes when throwing

As it's a lot better for the knees and ankles

as it makes moving around on the balls of the feet

a lot easier and smoother

Placing the shot:

The shot put should be placed on the fingers

The shot is placed in the neck against the jaw or a little bit behind against the jaw

Be carefull not to make too much throws per training

12 to 18 throws should be enough and reduces the chance of injuries

Power position or powerstance:

Asuming a powerstance

One leg in front one leg behind

The hips and shoulders should form an x seen from above

And the toes and knee should form a line with the chest

And 70 to 80 percent of the bodyweight should be on the back leg or the leg wich is leant on

and 20 to 30 percent of the weight on the front leg

The non throwing arm is held in front of the body

Feet placement types:

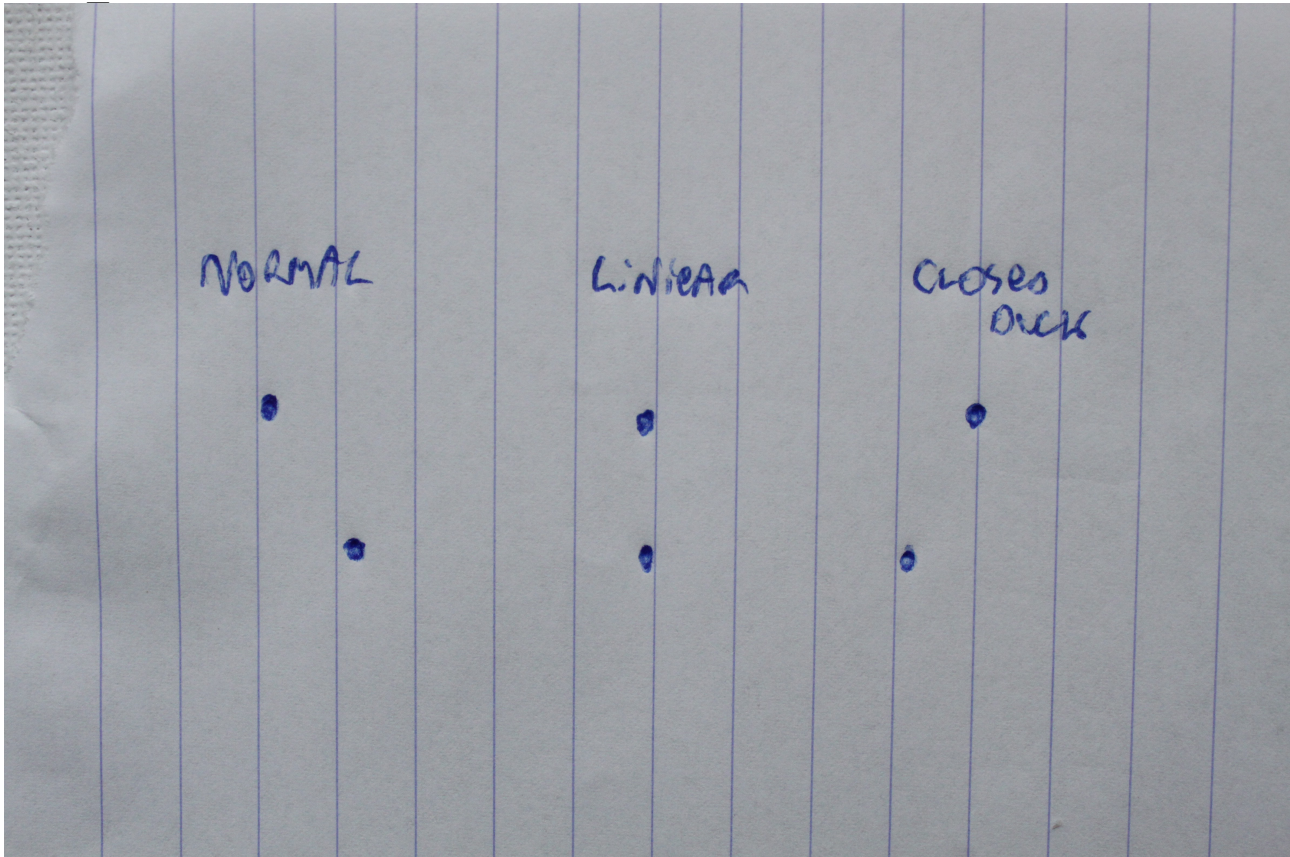
Power stance phase:

Normal

Linear

Closed duck

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A good throw is made doing the triple extension

Extending the feet, knees and hip

To create a kinetic chain together with the twisting of the upper body and the use of the shoulders and the arms

The upper body should be strong enough to support the chain and add additional power

Most power comes from the legs and hip

Go from low or medium low and bend(bend knees) to high and extended

If you start pretty low do squats to increase upward power

Block with the left leg:

A good block equals a better throw

Work up against the blocking leg
The stick method
The leg is almost fully extended
The pole vault method
Where the leg is bend a little to quite a lot
and while throwing extends again

Use weightshifting (that's why 70-80 percent of the weight is on the back leg)
for even further throws

Throwing angles:
The throwing angle should be around a 35 degree to a 45 degree angle
Using the right angle can result in further throws

Chin angles:
Don't look down while throwing
-Looking down while throwing will disrupt
the kinetic chain
The chin should have a slight upward angle when the throw is made

Inverted C:
The body creates somewhat of what is called an inverted C while just after
the power position
and the beginning of the throw
A lot of energie is stored produced and released this way

The glide:
Starting at the beginning of the ring
While facing the non throwing direction one leg is lifted of the floor
the body is bend, the knee is bend and one knee bend
And then a glide motion is made to the other side of the circle
asuming a power stance
first the standing leg pushes of while the other leg than makes
a kicking or a swaying motion backwards
Some people make a small hopping motion without leaving the ground
before starting the glide

Most gliders place the shot a little bit more forward against the jaw than rotational shot putters do

Tip: Do stability exercises
Especially with the glide

Get comfortable in the glide begin stance
With and without the implement

A good glide training is hopping along a line in the glide starting position with one leg off the floor and a bent body

Another good training is standing in the beginning position and putting the non standing leg towards the other side of the circle and then pulling back the other leg towards a power stance

An interesting way of training:
Focus on;
Balancing
The push off
The kicking or swaying motion
Getting in to the power stance
The throw
And combine all of these

A glide technique:
While gliding thrust the left elbow or non throwing arm elbow backwards and after that back to in front of the body again assuming a power stance

The rotational:
-It's hard to explain the rotational in words it's probably best to just watch a shot put video
Is mostly learned by first doing a semi rotation
The rotational starts by doing a twist up or wind up to the other side of which you're going to move to this is to create tension
You should try and maintain this tension until the throw and use it
Then the left foot turns in and the left arm moves to the side
Then the right foot makes a swaying or somewhat kicking motion

with on the end a somewhat kneeing motion is made

Then there's a short air time

Then the right foot is placed an the left foot follows as soon as possible to come into a power stance and then the throw is made

Don't forget to use the non throwing arm to block or to create extra rotational force

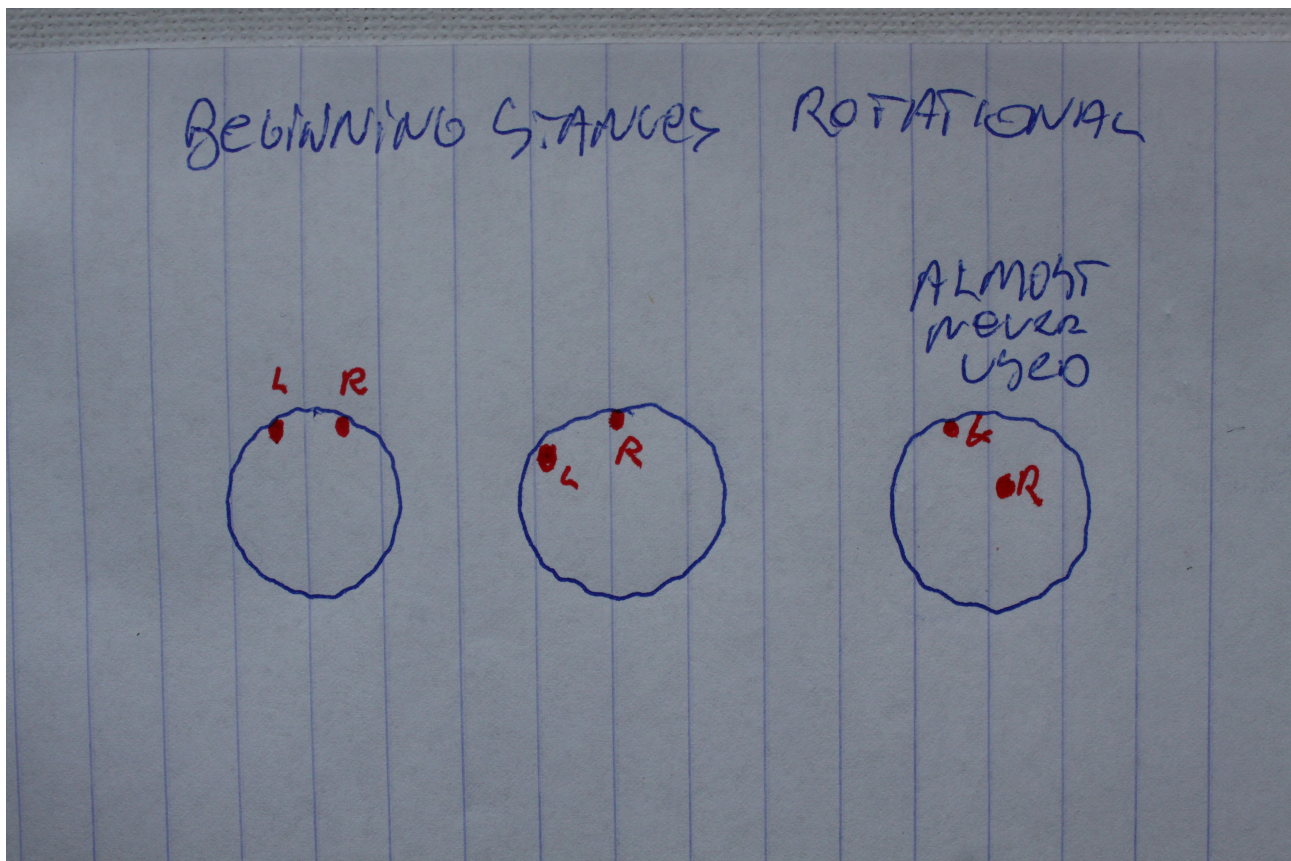
Most rotational shot putters place the shot somewhat more backward against the jaw

then gliders do

Foot placements in the beginning of the throw:

With the rotational shot put:

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A good active left foot and leg while doing the rotational can result in further throws

Types of throwing:

Active release

- The feet come loose from the ground, sometimes a small jump
- just pivoting and rotating afterwards can also be called an active release

Fixed feet release

- The feet stay fixed on the ground
- Fixed feet release almost never happens in shot put

Some shot putters block against the blocking block in the circle

Pivot drills:

First get used to standing on the balls of the feet

Is done by pivoting on the balls of the feet while rotating

90 degree turns

180 degree turns

270 degree turns

360 degree turns

Some people can even do turns between 450 and 720

Powerstance pivot drills:

180 degree turns to powerstance

Backward turns

The right leg or right feet is the one that pivots

While the left leg constantly moves backward in to a powerstance

Interesting way of training:

Focus on;

The wind up

Turning in the left foot

The throwing arm, elbow positions throughout the throw

With the rotational the elbow is lifted slightly by bending the body sideways while going to the throwing direction just before the power stance is taken

where the elbow goes to a lower position again

Non throwing arm use and positions throughout the throw

Right leg swing or kick

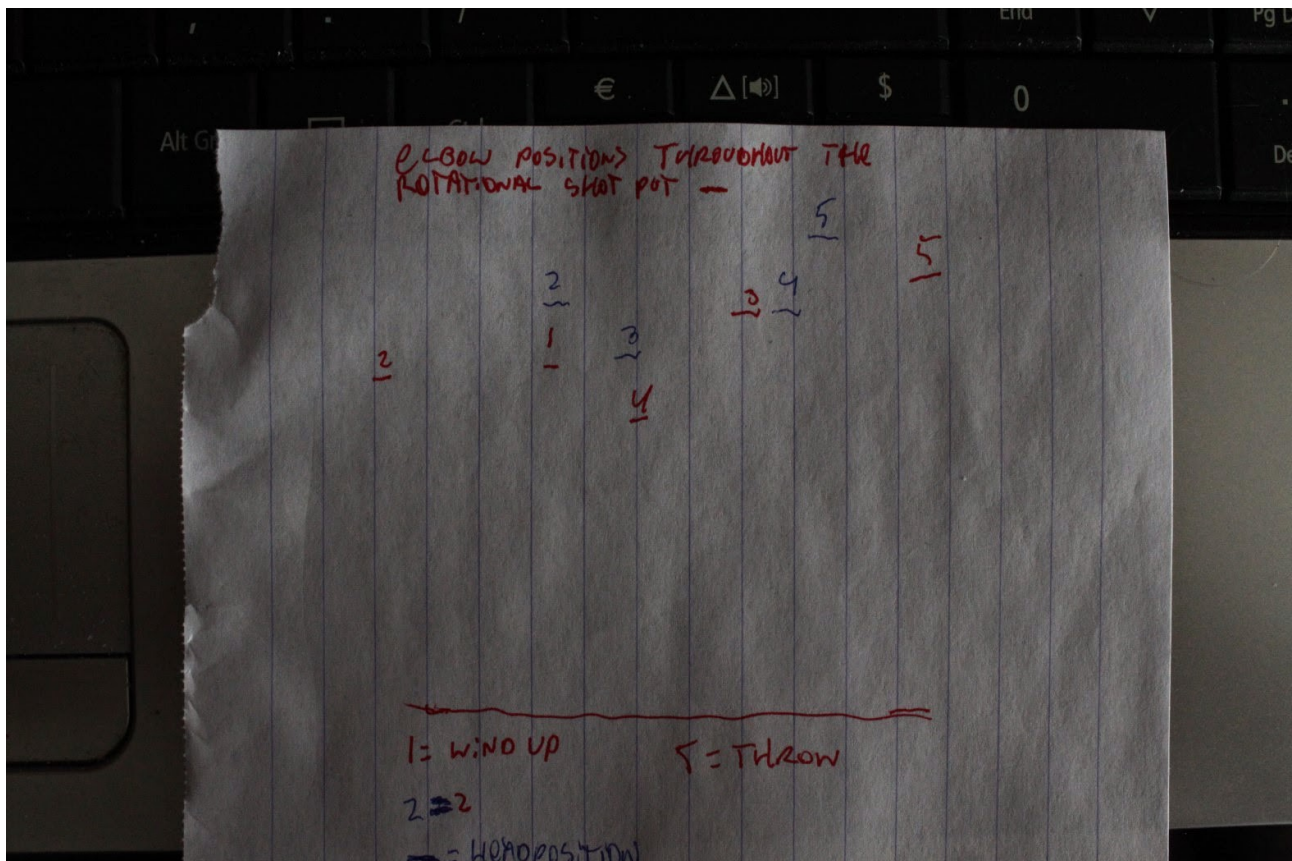
Getting into the powerstance

The throw and the release

And combine all of these

Check out the biomechanics of the shot put

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Tip:

In competition be carefull not to walk out of the ring to the throwing direction as the throw will then be declared a foul

Walk out of the ring to the non throwing direction

Warming up with the shot:

Throw the shot from the right or left hand to the other hand
at around hips or slightly lower than hips height

This can also be done behind the back the shot than circles
around the body by throwing it from one hand to another

You can also throw the shot from one hand to another by lifting
the leg up and throwing it from under the leg to the other hand

Another thing is just holding the shot while the shot is facing down
this requires a lot of finger strenght

Another fun thing to do is catch the shot after doing one full circle
around the shot with the hand

Be carefull the shot doesn't hit the hand

Get comfortable with the implement

Play with it

Do plyometrics like push ups and squats for overall conditioning
Rocket jumps are also very usefull

Strength power and explosiveness training
Trainings like weightlifting and short sprinting can be done
to develop strength power and explosiveness

Shot put world records:
Outdoor: 23.12 m
Indoor : 22.66 m
Both done with the rotational style
The furthest indoor glide throw is 22.24 m
The furthest outdoor glide throw is 23.06 m

Technique times of professional shot putters:
The time starts right after the wind up until the implement
leaves the hand
Gliders:
around 0.75 seconds to 0.90 seconds
Rotational shot putters:
around 1.15 to 1.45 seconds

Good technique a lot of explosive power and good and fast speed equals a
far throw
Muscle memory also plays an important role

Specific strength training
Squats and front squats
One third squat
Half squat
Full squat (be carefull with the knees)
Bench press
Olympic weightlifting
Hang power cleans
Hang power snatches
Jerks
Heel raises

Front yoke walk

Very good for the upper body

The bar is hold on the front not on the back

I'd advice to start with low weights

Lunges

With very low weights

Plate twists

Don't throw the plate that's another exercise

Arm holds

Hold a plate in front of the body with extended arms

Hold two dumbbells side ways at shoulder height with extended arms

Do box jumps and rocket jumps without weights

A weight vest could be worn though

Do sprint starts

Especially for the glide for a better and faster start

Tip:

Leg agility (agility ladder for example)

and hurdle exercises can be done to improve footwork

Tip:

Also do flexebility training

Do leg flexebility training for the glide

Fun to know:

There's a cartwheel shot put style but it is very dangerous and in competition normally ruled as a foul

Throw as explosive as possible with good technique

And enjoy throwing